APPENDIX II

SOCIOECONOMIC IMPACT ANALYSIS OF PROPOSED AMENDMENTS TO REGULATION 8, RULE 3: ARCHITECTURAL COATINGS

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Prepared for

Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

Prepared by

Applied Development Economics
2029 University Avenue, Berkeley, CA 94704 (510) 548-5912
1029 J Street, Suite 310, Sacramento, CA 95814

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INTRODUCTION AND SUMMARY

This report is prepared pursuant to the provisions of AB 2061 (Section 40728.5 of the Health and safety Code) requiring an assessment of socioeconomic impacts of proposed air quality rules. The report describes the paint manufacturing business affected by the proposed rule amendments and discusses the anticipated costs of compliance for these businesses. Impacts to employment and regional economic multipliers are also estimated.

The proposed rule amendments primarily affect 14 paint and coatings manufacturers in the Bay Area, which are estimated to employ about 535 workers. An additional 17 raw materials manufacturers, employing 1,225 workers, would be indirectly affected as demand for their products changes to meet the new standards. Potentially, more than 450 wholesale and retail paint supply outlets could be affected if manufacturers pass reformulation costs onto consumers.

It is estimated that the total cost of compliance would be about $8.76 million annually in the Bay Area, of which $2.98 to $4.03 million would be borne by manufactures located in the Bay Area. If the Bay Area firms absorb all of these costs, it is estimated that they would experience less than a two percent drop in profits, based on analyses of similar firms prepared by CARB. If the firms choose to pass the costs on to consumers, the commensurate loss of spending on other goods and services could result in the loss of 210 jobs in the Bay Area. However, this is not a significant impact, given that the region creates many thousands of new jobs annually.

DESCRIPTION OF THE PROPOSED RULE

Architectural coatings are any coatings, including primers, sealers, and stains, sold for application to stationary structures and their appurtenances, including houses, buildings, bridges, tanks, railings, streets highways and curbs. Regulation 8, Rule 3: Architectural Coatings imposes volatile organic compound (VOC) limits on paints and coatings applied to architectural structures. The Rule contains a general VOC limit and numerous categories of products that have specific VOC limit. The Rule affects manufacturing, sale, distribution, and use of architectural coating products.

Staff of the California Air Resources Board (CARB), in conjunction with staff of California air districts and under the direction of the California Air Pollution Control Officers Association (CAPCOA), developed a suggested control measure (SCM) for architectural coatings based on analysis completed in 1998, 1999, and 2000. The proposed amendments to District Rule 3 are derived from the SCM, as was expected from the statewide process,

and will impose more stringent VOC standards on certain types of coatings. Manufacturers of these coatings will need to reformulate the products to meet the new standards.

EMPLOYMENT AND ECONOMIC IMPACTS ANALYSIS

To study the socioeconomic impact of the Rule 3 amendments on the architectural and industrial maintenance (AIM) coatings manufacturing industries and suppliers, this study relies on data and methodologies utilized by both the California Air Resources Board (CARB) and the South Coast Air Quality Management District (SCAQMD) to analyze similar rule amendments.

Affected Businesses

All coatings are manufactured or marketed by 152 companies nationwide, of which 52 are based in California, according to the 1998 ARB survey. These companies generated about $7 billion in national sales in 1997, of which an estimated $870 million was in California (NPCA, 1999a-c).[1] The architectural coatings companies marketed an estimated total of about 48.2 million gallons of paints and coatings in California outside the SCAQMD in 1996, of which 30.9 million gallons was compliant and 17.3 million gallons was non-compliant. California firms, while comprising 34 percent of the national coatings market, sold 58 percent of the non-compliant coatings in California in 1996.

The architectural and industrial maintenance (AIM) coatings manufacturing industry consists of paint and coating manufacturing (NAICS 32551) printing ink manufacturing (NAICS 32591), and has a total of 14 firms in the Bay Area (Table1). Companies which supply resins, solvents, and other chemicals for use in making AIM coatings are classified in both organic and inorganic chemicals and allied products (NAICS 325188 and 325199). There are 17 of these firms in the Bay Area. In addition, there are nearly 450 paint wholesale and retail outlets in the Bay Area.

It is estimated that the affected coatings manufacturers and raw materials suppliers employ about 1,660 workers and have nearly $900 million annually in sales. Table 1 also indicates the high value added produced by these industries, which exceeds $260,000 per employee. High value added industries typically exhibit higher productivity, higher wages, and higher economic multipliers than do other industries.

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[1] National Paint & Coatings Association. "Paint & Coatings Industry Facts." http://www.paint.org/ind_info/facts.htm. 1999. National Paint & Coatings Association. "Clean Air and the Paint and Coatings industry." http://www.paint.org/ind_issue/dec98ib.htm. 1999.

As is discussed below in the economic impact analysis, the raw materials manufacturers would not be significantly affected by the proposed amendments, since they would be most likely to pass on any higher costs for their products to the coatings manufactures themselves. The coatings manufacturers would be affected to the extent they must absorb the higher costs of reformulating the non-compliant coatings. Alternatively, if demand is sufficient, they may pass the costs on to retail consumers and the construction industry. According to Market Tracking International (MTI), the demand for architectural coatings has continued strong in recent years, although this could be affected by the current recession. In the U.S., manufactures sales of architectural paint totaled $6.1 billion in 1997, accounting for 37 percent of the total U.S. coatings market, according to business trend Analysts (BTA), Commack, NY. BTA estimates that the US architectural coatings market will grow at a rate of 2.5 percent per year to reach $7.8 billion in 2007. [2]

TABLE 1

BUSINESSES AFFECTED BY PROPOSED AMENDMENTS TO REGULATION 8, RULE 3: ARCHITECTURAL COATINGS

NAICS	Business Type	Affected businesses	Affected Employment	Payroll ($1,000)	Value added by Manufacturing ($1,000)	Value of Shipments ($1,000)
325188	Raw Materials (Inorganic)	12	375	15,222	101,228	194,402
325199	Raw Materials (Organic)	5	750	39,847	229,582	506,943
32551/ 32591	Paint and Coating Manufacturing (pt)	14	535	21,357	113,312	193,950
Total		31	1,660	76,426	444,123	895,295

Source: ADE, Inc., based on data from U.S. Bureau of the Census, 1997 Census of Manufactures.

Costs to Manufacturers

The CARB analysis estimated the cost to reformulate the coatings to comply with the rule amendments at $25,000 per product line, up to a maximum of $28,000 per manufacturing business. This is based on part by EPA studies of similar measures and in part on business surveys conducted by CARB. The figures are also corroborated by a separate analysis conducted by SCAQMD for their rule amendments. Together, CARB and SCAQMD estimate that the total cost of compliance statewide would be about $43 million.

[2] The architectural Coatings Market. <http://coatingsworld.com/jan001.htm 2001>

The cost in the Bay Area is estimated at $8.76 million, based on the average cost per ton of VOC reduced of $6,400 estimated by CARB. This figure is corroborated by the CARB and SCAQMD analyses, which determined that the compliance costs are approximately proportional to the population base in each region. The Bay Area has about 20 percent of the state's population, and on this basis would experience costs of about $8.6 million annually.

Only a portion of these costs would be borne by Bay Area manufacturers, however. Statewide, only 34 percent of the firms selling coatings are based in California. If a similar proportion of coatings sales in the Bay Area were made by local firms, the estimated cost of compliance for these firms would be $2.98 million annually. This would be an average of $213,000 per firm. The costs could possibly be higher, since CARB estimated the maximum cost per firm at $288,000. Moreover, while 34 percent of total coatings manufacturers are based in California, they sell 58 percent of non-compliant coatings in the state and may therefore experience proportionally compliance costs. At $288,000 per firm, the total cost in the Bay Area would be $4.03 million per year.

The CARB analysis focused on the impact of the SCM on the profitability of coating manufacturers, and their analysis assumed that all costs would be absorbed by the industry rather than passed through to the end users, based on the survey responses they received from coating manufacturers. CARB then analyzed whether the compliance costs could affect the profitability of the firms, leading potentially to job losses. CARB addressed the impacts by analyzing the effects of the compliance costs on the return on equity (ROE) for a selected sample coating manufacturers. Return on equity measures net profit of a company divided by net worth, before and after the estimated costs to reformulate coatings. The report determined that the expected decrease in ROE averaged only 1.1 percent. Less than a 10% decrease in ROE is not considered significant. CARB concluded that the SCM is not expected to cause a noticeable change in California employment and payroll of the coating manufacturers because the proposal will not significantly alter their profitability.

The CARB's analysis is corroborated by ADE's analysis of costs for the Bay Area. The range of $2.98 to $4.03 million per year represents 1.5 to 2.1 percent of sales by the affected businesses. The BAAQMD socioeconomic standards of significance indicate that, "cost impacts that are less than two to three percent of sales would not be considered significant except under special circumstances or where small businesses are required to bear capital costs for which financing may not be available or may be cost prohibitive."[3] As is discussed

[3] Applied Development Economics, Methodology for Preparing Socioeconomic Analyses of Air Quality Rules, July 21, 1993. Bay Area Air Quality Management District. p. 7.

below, the CARB analysis provides no evidence to suggest that small businesses would be adversely affected as a group, although individual businesses may experience impacts.

If the total compliance costs are absorbed by the manufacturers, as is assumed in this part of the analysis, there would also be no adverse impact on employment or payrolls in the Bay Area. If the cost increases are passed on to consumers, including construction businesses and other businesses that use the affected coatings, there could be regional employment impacts as described below.

Costs to Consumers

The CARB study also projected the maximum potential impact on consumers by assuming that all the costs of reformulation are passed on in the form of higher coating prices. Based on this assumption, the study projected that the producer cost increases range from $1.20 to $1.70 per gallon with an average of $1.40 per gallon. The retail price increase is estimated by using 4 times multipliers that assumes both the wholesaler and retailer double the price. Thus the estimated maximum retail price increase would be $4.80 to $6.80 per reformulated gallon with an average of $5.60 per gallon. However, the study also noted that consumers might purchase currently available compliant flat and non-flat coatings with no increase in price due to reformulation.

The SCAQMD analysis adopted this approach in estimating the potential regional employment impacts. Under a worst case scenario, if consumers were faced with the maximum price increase noted above and were unable to use other complying coatings for their applications, they may reduce spending by a like amount on other goods and services in the Bay Area. This would in turn reduce demand for those products and possibly result in employment decreases. SCAQMD modeled this impact with a regional economic model for the South Coast area and estimated that the maximum employment impact would be 374 jobs, out of a total of 6.5 million jobs in the district.

A similar scale of impact in the Bay Area could result in the loss of 210 jobs. Compared with the estimated total of 3.65 million jobs in the Bay Area this impact is hardly measurable. ABAG projected the Bay Area to gain more than 50,000 jobs per year over the next five years, although the current recession may slow that pace somewhat.[4]

Cost to Small Business

According to CARB staff, smaller coating manufacturers tend to respond to niche markets that are based on competitive factors other than price. These companies depend on

[4] ABAG, *Projections 2000*. Oakland. December 1999.

specialty coatings, brand loyalty, customer service, and other non-price related factors. CARB estimated the impact to ROE for smaller firms to be 1.69 percent, compared to 0.06 percent for large firms. While this is a large difference in impact, it is still below the ten percent threshold of significance established by CARB. In addition, smaller wholesale and retail companies generally sell products from all types of manufacturers and should be unaffected by the proposed rule amendments.